

PATENT ABSTRACTS OF JAPAN

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(54) PROTECTOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a protector for easy treatment of a cord of a headphone device while a remote control unit is protected.

SOLUTION: A protector body is provided which has such shape as to be so attached as to cover the perimeter of the remote control unit with an expandable/shrinkable terminal. The protector body is provided with a window where an operation knob and a display unit formed at the remote control unit are exposed while it is attached to the remote control unit, and a taking-up part which takes up the cord of the headphone device.

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CLAIMS

[Claim(s)]

[Claim 1] While the protector body made into the configuration with which it can equip is formed so that the perimeter of the above-mentioned remote-operation section may be covered with the quality of the material which has elasticity to the headphone equipment with which the remote-operation section was prepared The protector characterized by preparing the window part which makes the above-mentioned

protector body express the handler and display which are formed in the above-mentioned remote-operation section where the above-mentioned remote-operation section is equipped, and preparing further the rolling-up section which rolls round the code of the above-mentioned headphone equipment.

[Claim 2] The protector according to claim 1 characterized by preparing the stop section stopped so that the above-mentioned code may not separate from the above-mentioned rolling-up section when the above-mentioned code is rolled round by the above-mentioned rolling-up section.

[Claim 3] The window part which makes the above-mentioned display express in the condition that the above-mentioned code was rolled round by the above-mentioned rolling-up section is a protector according to claim 1 characterized by trying to be closed in above-mentioned code.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the protector with which the remote-operation section is equipped to the headphone equipment with which the remote-operation section was prepared, and the so-called headphone remote control.

[0002]

[Description of the Prior Art] For example, a user connects headphone equipment and

is made to enjoy musical playback by player devices, such as a portable tape player, a disk player, and a memory card player. Moreover, although formed to the both ends of a code (cable) in the headphone section with which a user equips a lug, and the plug section linked to the above-mentioned player device, that in which the remote-operation section (henceforth the remote control section) is formed in the middle of this code also usually has much headphone equipment. The display which shows a user the actuation key which directs playback, a halt, a rapid traverse, etc. to a player device, the operating state in a player device, etc. is prepared in this remote control section. By such the remote control section being formed, since a user can perform various actuation from the remote control section or can check operating state in the condition [having put for example, the player device into a bag or a handbag], he is very convenient.

[0003]

[Problem(s) to be Solved by the Invention] By the way, for the user using a portable player device, while not using it, processing of the code of headphone equipment is troublesome. That is, if it puts in into a bag etc., without caring especially about a code when finishing using headphone equipment, in case a code twines and it is used for a degree, it will become what requires time and effort very much. Moreover, by the code being confused in a bag etc., it is inconvenient also to receipts and payments of other objects.

[0004] As opposed to such a fault, the thing equipped with the device which rolls round and contains a code inside a device by the player device side is also proposed. However, since enlargement and weight increase of the structure of the part player device occur, it is not desirable to establish a rolling-up receipt device to the portable equipment asked for small lightweight-ization. Moreover, it is the comparatively small interior of a player device, and in order to form the still smaller rolling-up section, there is also a fault of being easy to produce an open circuit of the core wire of a code, according to a rolling-up configuration or the tension at the time of rolling up. Structure of the take-up motion is complicated, and since it is easy to break, and the repair as a body of a player device is needed when it breaks, it is not still more desirable for a user.

[0005] It is called for that it can be made to perform processing of the code of the headphone equipment at the time of un-using it easily and appropriately from these things.

[0006] Headphone remote control is carried by the user with a player device etc., and is treated comparatively roughly, and a blemish tends [furthermore] to attach the

remote control section etc. For example, if a blemish attaches the remote control section in which the display by a liquid crystal panel etc. is formed on the surface of a display, since it becomes impossible for the display function to fully demonstrate and a user's visibility will fall, it is also called for that especially the remote control section is protected.

[0007]

[Means for Solving the Problem] This invention enables easy processing about the code of headphone equipment in view of such a trouble, and it aims at offering the protector which enabled it to protect the remote control section further.

[0008] For this reason, the protector body made into the configuration with which it can equip so that the protector of this invention might cover the perimeter of the above-mentioned remote-operation section with the quality of the material which has elasticity to the headphone equipment with which the remote-operation section (remote control section) was prepared is formed. And the window part which makes the handler and display which are formed in the above-mentioned remote-operation section express where the above-mentioned remote-operation section is equipped is prepared in the above-mentioned protector body, and the rolling-up section which rolls round the code of the above-mentioned headphone equipment is further prepared in it.

[0009] Moreover, when the above-mentioned code is rolled round by the above-mentioned rolling-up section, the stop section stopped so that the above-mentioned code may not separate from the above-mentioned rolling-up section is prepared. Moreover, in the condition that the above-mentioned code was rolled round by the above-mentioned rolling-up section, the window part which makes the above-mentioned display express is made into the structure of making it closed in above-mentioned code.

[0010] That is, while forming the protector which equips the remote control section and can protect the remote control section, a user enables it to process a code easily by forming the rolling-up section of a code in this protector by this invention at the time of un-using [of headphone equipment] it.

[0011]

[Embodiment of the Invention] Hereafter, drawing 1 - drawing 5 explain the remote control protector 1 as a gestalt of operation of the protector of this invention. Drawing 2 explains first the headphone remote control 20 with which the remote control protector 1 of this example is attached. Drawing 2 (a), (b), and (c) are what showed the headphone remote control 20 connected to a portable player device, and

drawing 2 (a) shows the condition that drawing 2 (c) removed headphone side code 22a for the condition that drawing 2 (b) looked at the remote control section 30 for the condition of having seen the remote control section 30 from the left lateral, from the transverse plane, from the remote control section 30, respectively.

[0012] As for the headphone remote control 20, the plug section 21 is formed in the end like drawing 2 (a). This plug section 21 is connected to the correspondence terminal area of a player device. From the plug section 21, the remote control section 30 is formed through plug side code 21a, and the headphone section 22 is formed through headphone side code 22a from the remote control section 30.

[0013] From the player device to which the plug section 21 is connected and which is not illustrated, L and the audio signal of R channels are supplied, the audio signal is supplied to the headphone section 22, and a way sound is carried out. Moreover, between a player device and the remote control section 30, supply of supply of the actuation information of the user from the remote control section 30, the display information from a player device, or supply voltage is performed.

[0014] The display 31 by the liquid crystal panel is formed in the transverse-plane side, and various kinds of displays based on the display information from a player device are made to be performed in the remote control section 30. Moreover, the actuation key 34, the actuation dial 33, etc. are formed in the remote control section 30 as a handler to which a user operates it. In the case of this example, the actuation key 34 is formed in the left lateral of the remote control section 30. Moreover, although not illustrated, the actuation key 34 may be formed in the right lateral. Moreover, let the actuation dial 33 prepared in the edge be the handler in which rotation actuation and press actuation are possible. A user is made to have playback of a player device, a halt, a rapid traverse, and actuation of various kinds already, such as return, search, a halt, and a mode change, performed by these handlers.

[0015] The clip 32 formed in the tooth-back side of the remote control section 30 is a fixture for a user to attach this remote control section 30 in a chest pocket etc. The jack section 35 is a part which connects plug 22b of headphone side code 22a shown in drawing 2 (c). That is, headphone side code 22a is dismountable from the remote control section 30.

[0016] About the remote control protector 1 of this example with which the remote control section 30 of such headphone remote control 20 is equipped, a front view, a left side view, a right side view, rear view, a top view, and a bottom view are shown in drawing 1 (a), (b), (c), (d), (e), and (f).

[0017] This remote control protector 1 is formed with the quality of the material with

elasticity, such as rubber material. The remote control protector 1 is made into the structure where the left plate section 2 and the right plate section 3 were connected by the connection sections 4a and 4b of a upside pair, and the connection sections 5a and 5b of a lower pair so that it may illustrate. And it becomes the left plate section 2 and the rolling-up section 12 around which the space across which it faces in the right plate section 3 can twist the codes (a plug side code and headphone side code) 21a and 22a of the headphone remote control 20 mentioned above.

[0018] The notching section of the shape of 3 character [L] is formed in the left plate section 2 and the right plate section 3 as the stop section 6 up, respectively. Below, the notching section of the shape of 3 character [L] is similarly formed as the stop section 6.

[0019] Moreover, as shown in drawing 1 (b), a slit is formed in the center section of the left plate section 2, and let this be an aperture 10. As shown also in the center section of the right plate section 3 at drawing 1 (c), the same slit is formed, and let this be an aperture 11. Furthermore, it becomes an aperture 8 between connection section 4a and connection section 5a so that drawing 1 (a) may show. Moreover, it is made into an aperture 9 between connection section 4b and connection section 5b like drawing 1 (d).

[0020] The condition of having equipped the remote control section 30 with such a remote control protector 1 is shown in drawing 3 (a) and (b). Drawing 3 (a) is in the condition shown corresponding to the front view of drawing 1 (a), and shows drawing 3 (b) in the condition corresponding to the left side view of drawing 1 (b).

[0021] In case the remote control section 30 is equipped with the remote control protector 1, plug 22b of headphone side code 22a is first removed from the remote control section 30. And the remote control section 30 is stuffed into the interior of the elastic remote control protector 1 in the condition. After letting the plug section 21 and plug side code 21a pass among the connection sections 4a and 4b first at this time, the remote control section 30 is pushed in inside the remote control protector 1. And the remote control section 30 will be in the condition of drawing 3 by connecting plug 22b of headphone side code 22a to the jack section 35 of the remote control section 30 in the condition of having been pushed into the interior of the remote control protector 1.

[0022] In the state of wearing of this drawing 3 , the actuation key 34 will be in the condition of being expressed from an aperture 10, like drawing 3 (b) first. Therefore, press actuation of the actuation key 34 is enabled in the state of wearing. Moreover, the actuation dial 33 is in the condition that right and left were sandwiched by the left

plate section 2 and the right plate section 3 so that drawing 3 (a) and (b) might show. However, since the remote control protector 1 is formed by elastic rubber material etc., from the outside of the left plate section 2 and the right plate section 3, a user can pinch the actuation dial 33 and can rotate it. That is, every right-and-left Itabe 2, 3, and the actuation dial 33 can be operated. Of course, press actuation of an actuation dial also becomes possible by pushing so that the left plate section 2 or the right plate section 3 may be bent. Since the lower part of right-and-left Itabe 2 and 3 who touches especially the actuation dial 33 serves as a part where the movability is high by notching used as the stop section 7, the operability of the actuation dial 33 does not necessarily get worse.

[0023] Actuation of the user according to the remote control section 30 also in the condition of having been equipped with the remote control protector 1 as mentioned above is possible like the time of un-equipping. In addition, when the actuation key is formed in the right lateral side of the remote control section 30, since the actuation key is expressed from the aperture 11 formed in the right plate section 3 shown in drawing 1 (c), it becomes operational also in this.

[0024] Moreover, since a display 31 will be expressed by the aperture 8, a user can see the contents of a display of a display 31, so that drawing 3 (a) may show. Moreover, although not illustrated, it is convenient also for a clip 32 and the jack section 34 expressing from the aperture 9 shown in drawing 1 (d), therefore a user attaching the remote control section 30 in a chest pocket etc. with a clip 32. Of course, it is convenient also to attachment and detachment of plug 22b of headphone side code 22a to the jack section 35.

[0025] And the protection feature to the remote control section 30 is obtained like this drawing 3 by always equipping the remote control section 30 with the remote control protector 1. That is, it can prevent that remote control section 30 the very thing collides with an object, and a blemish is attached to the case and display 31, and the impact in the cases, such as fall, is also mitigated by the elasticity of the remote control protector 1.

[0026] Thus, when equipped with the remote control protector 1, in case use of the headphone remote control 20 is finished, Codes 21a and 22a are rolled round in the rolling-up section 12 of the remote control protector 1. The condition that Codes 21a and 22a were rolled round is shown in drawing 4 (a) and (b). That is, a user twists Codes 21a and 22a to the rolling-up section 12 of the remote control protector 1 formed in the shape of a bobbin by the left plate section 2, the right plate section 3, and the connection sections 4a, 4b, 5a, and 5b. And it is made to stop the part of the

arbitration near the headphone section 22 near the termination 21 of rolling up, i.e., the plug section, any of the stop sections 6 and 7 they are. The codes 21a and 22a of the headphone remote control 20 are stopped by this in the condition of having been rolled round at the remote control protector 1. Therefore, Codes 21a and 22b twine round a bag or a pocket as stripes in the condition, or a user is not confused.

[0027] In addition, in this example, the three stop sections 6 and 7 will be formed in right-and-left Itabe's 2 and 3 upper part, and a lower part at each a total of 12 places. Thus, much stop sections 6 and 7 are formed, and it can be rolled which stop section is stopped, it can stop a part just right in the case of the end, and becomes more suitable because it is a user's arbitration. Moreover, the stop force can be strengthened by stopping one code edge over two or more stop sections. For example, drawing 4 shows the example which is making the two stop sections 6 stop the near part of the plug section 21 of plug side code 21a.

[0028] Moreover, the rolling-up section 12 will pass along the front of the aperture 8 which had expressed the display 31 like drawing 3 (a) so that drawing 4 (a) may show in this example. Therefore, a display 31 will be in the condition of having been covered, in twisted codes 21a and 22a. At the time of un-using [of the headphone remote control 20] it, Codes 21a and 22a will function as a protector to a display 31, and this can prevent more effectively the blemish and dirt of a display 31 at the time of un-using it.

[0029] Moreover, the remote control protector 1 of this example is formed by the integral part of rubber material, and is the very easy structure, and its fear of failure is very small compared with the code winder style in the conventional player device. Moreover, it can manufacture by low cost. Moreover, even if it compares and damages, a user's burden serves as the minimum that what is necessary is to exchange only the remote control protector 1.

[0030] Drawing 5 explains the modification of the gestalt of operation. This example is an example which does not form the above stop sections 6 and 7. Since it is not held if the edge of the codes 21a and 22a twisted around the rolling-up section 12 remains as it is when not forming the stop sections 6 and 7, it is possible to be confused after that. Then, the auxiliary implement 50 as shown in drawing 5 (a), (b), and (c) is used. This auxiliary implement 50 is made into a configuration by which the cross-section [of U characters]-like attaching parts 51 and 52 were considered as confrontation. And it is made to make the edge of plug side code 21a twisted around the rolling-up section 12, and the edge of headphone side code 22a hold by attaching parts 51 and 52, respectively, as shown in drawing 5 (d). For example, if such an auxiliary implement

50 is used, it will necessarily be less necessary to form the stop sections 6 and 7. In addition, even when it has the stop sections 6 and 7 as mentioned above natural, it is possible to use the auxiliary implement 50 together. Moreover, like drawing 5 (d), with Wire W (or string), the auxiliary implement 50 can prevent loss and can use it immediately by tying to the remote control protector 1 at the time of the need.

[0031] As mentioned above, although the gestalt of operation has been explained, modifications various as a protector of this invention can be considered. It cannot be overemphasized that it is what should be designed according to the configuration of the remote control section of headphone remote control where the location of the configuration of a protector, size, an aperture, or the rolling-up section etc. especially serves as a candidate for wearing, size, a display, arrangement of a handler, etc.

[0032]

[Effect of the Invention] In this invention, it is effective in protection of the remote control section being realizable by the remote-operation section (remote control section) of headphone remote control being equipped with the protector of the quality of the material which has elasticity so that the above explanation may show. Moreover, actuation of a user and the check of the contents of a display can be performed to usual, equipping a protector with a protector by the window part corresponding to the control unit and display of the remote control section being formed, and it is satisfactory on use.

[0033] And when finishing use for headphone by rolling round to a protector and the section being formed further, it can prevent that a user can do processing of a code by twisting a code around the rolling-up section, for example, a code confuses or twines in a bag. Naturally, also in case it is used for a degree, a code can be loosened easily, and trouble is lost.

[0034] Moreover, by the stop section stopped so that a code may roll round and it may not separate from the section, when a code rolls round and it is rolled round by the section being prepared, a code is held good, and twines in the condition of having been twisted around the rolling-up section, and ***** is completely lost. Furthermore, in the condition of the code having rolled round and having been rolled round by the section, the display of the remote control section becomes what is not expressed by the window part which makes a display express being plugged up with the rolled-round code, and since the display which is the part which should be protected most will be in the condition of being protected by the code at the time of un-using it, this can heighten a protective effect more.

[0035] Moreover, the protector of this invention shall not break easily while being able

to form by the very easy structure and being able to realize by low cost. Moreover, even if it has compared and damaged, a user's burden serves as the minimum that what is necessary is to exchange only a protector.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] They are the front view of the remote control protector of the gestalt of operation of this invention, a left side view, a right side view, rear view, a top view, and a bottom view.

[Drawing 2] It is the explanatory view of the headphone remote control equipped with the remote control protector of the gestalt of operation.

[Drawing 3] They are a front view in the condition of having equipped with the remote control protector of the gestalt of operation, and a left side view.

[Drawing 4] They are a front view in the condition of having rolled round the code to the remote control protector of the gestalt of operation, and a left side view.

[Drawing 5] It is the explanatory view of the modification of the gestalt of operation.

[Description of Notations]

1 Remote Control Protector, 2 Left Plate Section, 3 6 Right Plate Section, 4a, 4B and 5a, 5B Connection Section, 7 Stop Section, 8, 9, 10, 11 Aperture, 12 Rolling-Up Section, 20 Headphone Remote Control, 30 Remote Control Section, 31 Display, 33 Actuation Dial, 34 Actuation Key, 50 Auxiliary Implement